(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 2 November 2006 (02.11.2006)

CT (10) Int

(10) International Publication Number WO 2006/115597 A3

(51) International Patent Classification: F25J 3/00 (2006.01) F25J 1/00 (2006.01)

(21) International Application Number:

PCT/US2006/009103

(22) International Filing Date: 14 March 2006 (14.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/673,518 20 April 2005 (20.04.2005) US

(71) Applicant (for all designated States except US): FLUOR TECHNOLOGIES CORPORATION [US/US]; 3 Polaris Way, Aliso Viejo, CA 92698 (US).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): MAK, John [US/US]; 2242 Salt Air Drive, Santa Ana, CA 92705 (US).
- (74) Agent: FISH, Robert, D.; Rutan & Tucker, LLP, 611 Anton Blvd., Suite 1400, Costa Mesa, California 92626 (US).

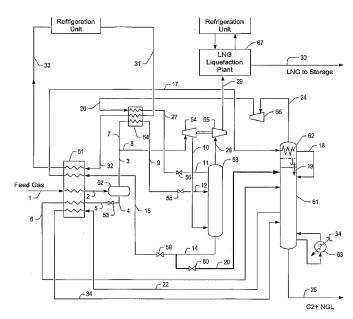
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

(88) Date of publication of the international search report: 3 April 2008

(54) Title: INTEGRATED NGL RECOVERY AND LNG LIQUEFACTION



(57) Abstract: Contemplated plants include a refluxed absorber and a distillation column, wherein the absorber is operated at a higher pressure than the distillation column to thereby produce a cryogenic pressurized lean gas. The lean gas is further compressed to a pressure suitable for liquefaction using energy from feed gas vapor expansion. Desired separation of C2 products is ensured by temperature control of the absorber and distillation column using flow ratios of various streams within the plant, and by dividing the separation process into two portions at different pressures.